EPRA's Feedback on the first round climate mitigation activities

Buildings - Construction of new buildings (residential and non- residential)

Sector classification and activity	
Macro-Sector	F – Construction Note that construction of new buildings relevant to any economic activity should be aligned with these thresholds.
NACE Level	2
Code	41, 43
Description	Construction of buildings (residential and non-residential); Specialised construction activities.

Mitigation criteria	
Principle	Construction of highly efficient new buildings can make a substantial contribution to climate mitigation objectives by avoiding emissions. The top performing buildings in a country based on GHG emissions or energy efficiency, should be eligible for the taxonomy. In-use monitoring of actual performance is required to demonstrate that the building performs as designed. This should be measured and adjusted according to the national calculation method or the ISO 52000 standard series (e.g. normalised occupancy patterns and normalised average climate conditions over a time-span of at least 2-3 years). Lock- in should be avoided[18]. The TEG has adopted a precautionary principle to exclude buildings dedicated to fossil fuel projects. According to the IEA's World Energy Outlook, no CO2-emitting energy infrastructure is to be developed in the coming years if the Paris Agreement target is to be met, as emissions from existing infrastructure will already cover 95% of the global carbon budget (ref. IEA World Energy Outlook 2018; see also this article from The Guardian).
	The TEG will investigate using in-use carbon performance (CO2e/m2/yr)

Metric	or in-use energy performance (kWh/m2/yr). Compliance with Member State definitions for Nearly-Zero Energy Buildings (NZEB) will be used where the above approach is not yet in place.
Threshold	The TEG will undertake additional work to investigate country specific thresholds for carbon and energy performance. Where the national methodology defining Nearly Zero Energy Buildings (NZEB) under the Energy Performance of Buildings Directive meets the relevant threshold, it will be considered to comply with the taxonomy. Where the threshold above is exceeded by the local NZEB methodology, the NZEB methodology will be the taxonomy standard. In the absence of additional thresholds, the NZEB standard will be the taxonomy standard.

Do no significant harm assessment	
(2) Adaptation	Thermal resilience of the interior environment of the building and exterior environment around the building. This can be achieved using e.g. green infrastructures of different types Resilience to increased risk of extreme weather events. This could include floods, rain, wind and snowfall as well as temperature stress. Minimisation of flood risks and improved property protection (including natural water retention and drainage areas)
(3) Water	In water scarce areas (see EEA water scarcity mapping) water consumption during the use phase is minimised. Examples of measures include: low-flow taps and showers, appliances, toilets and urinals, rain-water harvesting and grey water recycling. Minimise possible contamination to water during construction and with a focus on: prevention of emissions of harmful substances such as diesel and oil, paint, solvents, cleaners and other harmful chemicals; prevention of construction debris entering water courses.

(4) Circular Economy	Maximise opportunities to re-use materials and minimise waste during construction and demolition. Increase life span of building, adopting design solution for making easy the adaptation of the building. Maximise the future potential of building material reuse and recycling, adopting design solutions for ease of deconstruction[19].
(5) Pollution	Select location of building taking into account the demand of transport, e.g. by siting the building close to public transport system. For commercial buildings, implement of staff travel plans and infrastructure to support electric vehicles and cycling. Minimise emissions to air, water and soil from the construction site, e.g. address transport emissions during the construction phase. Select fit-out and finishes to reduce indoor pollution (VOC, radon, etc.); Design ventilation in order to ensure healthy air and minimise the intake of external air pollution.
(6) Ecosystems	Minimise the impacts on biodiversity by: Ensuring that new buildings are not constructed on protected land. Avoid building on arable or greenfield land of recognised high biodiversity or agricultural value. Avoid urban sprawl by, e.g. preferring brownfield over greenfield sites. Where significant quantities of timber are used for construction purposes, this should be certified according to FSC/PECF standards or equivalent.

Rationale	
Additional notes on conclusions reached	The mitigation principles reflect the fundamental Taxonomy aim of identifying economic activities which contribute substantially to climate change mitigation. The TEG is proposing thresholds which will encourage rapid transition of existing building stock while promoting high performance new buildings. Almost all new buildings in the EU as of 1 January 2021 (some limited exceptions are permitted by the legislation) will need to be NZEB as defined in the Energy Performance of Buildings Directive and Member State implementation standards. There are considerable advantages to aligning with an established legislative standard which is flexible, comprehensive and dynamic, taking into account building category, typology, physical boundary, type and period of balance, included energy uses, renewable energy sources (RES), cost optimality, etc. Regional variation however is also a challenge as it may mean that some national NZEB definitions are not sufficiently ambitious to include in the Taxonomy. The TEG notes that setting additional thresholds could address this issue and proposes to investigate this further. The Energy Performance Certificates (EPCs) are widely used in Europe to certify the level of energy performance of a building. Like with NZEB, the national definitions and classifications used for EPCs vary across EU Member States. The TEG also proposes to undertake additional research on Energy Performance Certificates (EPCs) to consider their use as a proxy when evaluating taxonomy compliance. For very high efficiency new buildings, embodied carbon can be significant. For this reason, a lifecycle metric would be preferable. International standard methodologies do exist for lifecycle emissions measurement, but data is limited and agreed thresholds are not available. For this reason, the Sustainable Finance Platform should work towards lifecycle thresholds in future iterations of the Taxonomy. Building bill of materials (kg) was considered as a proxy, but it was felt that this does not strongly enough correlate with embodied carbon or reflect possible choices for less carbon-intensive building materials. In-use monitoring is required as the energy and carbon performance of buildings often varies substantially between design and use phase (for example, see analysis by the Better Buildings Partnership).

[15] Defined as: decisions which result in loss of economically viable choices for reducing energy demand in the future. Source: Global Buildings Performance Network.

[16] Verification of design solutions shall be with reference to the Checklists provided in the European Commission's Level(s) framework. The checklists can be found in table 2.2.2/2.2.5 of the Level 1 common performance assessment guidance. Other semi-quantitative indices, scoring or calculator tools may also be used provided that they address as a minimum the majority of the design aspects covered by Level(s).

Questions on construction of new buildings (residential and non- residential)

1. Do you agree with the proposed principle for determining a substantial contribution to climate mitigation for this activity?

- ○ Yes
- ○ **No**
- ○ Don't know / no opinion / not relevant

If you do not agree with the proposed principle for determining a substantial contribution to climate mitigation for this activity, what alternatives do you propose and why?

2000 character(s) maximum

1. In recent report "World Green Buildings Trends 2018"[1], European countries indicated that they anticipated a higher level of green activity by 2021. If from an economical perspective evidence demonstrates that new constructions are economically more viable than deep building renovations, from a climate change mitigation point of view, the latter are also key to support decarbonisation of the building sector. In fact, in most of the cases, it can be much more energy consuming to build a new efficient building than to improve an existing building, especially if we look at the building's entire life cycle. For this reason we encourage the TEG to prioritise investments in existing stocks (i.e. ownership and maintenance of buildings) rather than in new developments and constructions.

2. With reference to design and in-use performance, listed property companies have experienced a massive gap between the expected and the actual performance of a building once in use. That said, the TEG on Taxonomy should be aware that the ex-ante approach proposed may lead to capital being allocated to buildings which do not meet the energy or carbon performance they were supposed to during the design phase.

3. It is also important that the Taxonomy identifies clearly, on one side, the activities that improve the overall performance of the asset and/or portfolio, and on the other side, the activities that merely finance the ownership of an existing asset over time. In other words, the Taxonomy should favour the actual construction/refurbishment of assets/portfolios as opposed to the sale of an existing efficient asset. A company that consistently invests in order to improve its existing stock will have a higher positive contribution over time than an investor who is just buying an existing efficient building.

2. Do you agree with the proposed metrics for assessing the extent of the mitigation contribution?

- ○ Yes
- ○ **No**
- ○ Don't know / no opinion / not relevant

If you do not agree with the proposed metrics for assessing the extent of the mitigation contribution, what alternatives do you propose and why?

2000 character(s) maximum

We do endorse the use of energy or carbon intensity metrics but we would like to highlight some potential limits of this approach:

1) Metrics on energy or carbon intensity only reflect the performance of an operating building and cannot be precisely defined ex-ante (before the building's completion) as they highly depend on the functioning of the building (i.e. occupancy). Moreover, listed property companies' experience shows that data collection related to tenants' consumption might represent a challenge and it is not always possible to build intensity metrics that really capture the overall performance of the building.
2) As mentioned previously, energy/carbon efficiency metrics of an in-use building do not really capture the climate change impact of a new construction. For this reason, the Taxonomy should favor a set of energy/carbon metrics which reflect the impact of an entire lifecycle of the building on climate change (e.g. embodied carbon of materials used for the new construction) to better inform capital allocation decisions.
3) Most property companies tend to define energy efficiency and carbon reduction targets across an entire portfolio, and not at a single asset level. Therefore, a company which strives to improve the performance of its entire portfolio should also be considered in the Taxonomy. For example, an average carbon / energy performance of a portfolio rather than a single asset threshold.

3. Where thresholds have been considered, please indicate whether you agree with the proposed thresholds for the activity to qualify for inclusion in the Taxonomy.

[1] Smart Market Report, 'World Green Building Trends 2018', Dodge Data & Analytics, 2018, p.12.

- Yes
- **No**
- Don't know / no opinion / not relevant

Please explain your answer to question 3. If relevant, you may propose alternative thresholds that could be considered.

2000 character(s) maximum

As a general comment, we recommend that thresholds reflect different asset types (commercial, residential, etc.) and change over time with a decreasing trajectory.

With specific reference to NZEB and EPC, we would like the TEG to consider the following aspects:

1. NZEB has not yet been implemented and NZEB thresholds not yet defined in many EU countries (e.g. in France, the closest concept to NZEB is the Positive Energy Buildings which has proven very hard to apply and not the most relevant in terms of the building's impact on climate change as it is based on in-use building energy which excludes grey energy). Moreover, as the definition of NZEB changes from one country to another, there is a risk that some countries might attract more capital by making the performance threshold less stringent.
2. As demonstrated by several studies (see for example the BBP report: http://www.betterbuildingspartnership.co.uk/sites/default/files/media/attachment/BBP%20JLL%20-%2%20Tale%20of%20Two%20Buildings%202012.pdf) EPCs are not very reliable in capturing the real performance of a building and for this reason we would discourage the TEG to use EPC as reference in setting carbon/energy thresholds.

4. Do you agree with the 'do no significant harm' criteria identified for these activities?

- Yes
- **No**
- Don't know / no opinion / not relevant

If you do not agree with the 'do no significant harm' criteria identified for these activities, what alternative approach or requirements do you propose (e.g. referring to existing market initiatives and best practices) and why?

2000 character(s) maximum

Although we do believe that the proposed 'do no significant harm' criteria are key for a building's operation and construction, most of them cannot be defined at single building level or by the building's owner. In fact, matters such as resilience or adaptation are covered by public authorities in local planning regulations as they have to be managed at the scale of a city or a neighborhood (flood protection, green land, air quality control). That said, even if corporates operating in real estate are willing to work in partnership with cities and local authorities to find common solutions to these issues, it is not clear how the TEG would evaluate these criteria and how they will be impacting the usability.

5. Is there any key area where significant harm needs to be avoided and which is not mentioned already?

- Yes
- **No**
- Don't know / no opinion / not relevant

Please explain your answer to question 5 and what requirements could be used to avoid such harm:

2000 character(s) maximum

N/A

6. Would the proposed criteria give rise to adverse consequences, e.g. risk of stranded assets or the risk of delivering inconsistent incentives?

- **Yes**
- No
- Don't know / no opinion / not relevant

Please explain your answer to question 6:

2000 character(s) maximum

1. As mentioned in question 1) EPRA's main concern is related to the ex-ante approach proposed by the TEG that may lead to capital allocation to buildings which do not meet the energy or carbon performance as expected in the design phase. Identifying gaps between designed and actual performance ex-post would not help from a taxonomy perspective, as the capital would have already been invested.

2. Capital allocation through the use of EPC would surely lead to delivering inconsistent incentives, as EPCs are not very reliable in capturing the real performance of a building, as demonstrated by many studies. (See for example the BBP report: http://www.betterbuildingspartnership.co.uk/sites/default/files/media/attachment/BBP%20JLL%20-%2%20Tale%20of%20Two%20Buildings%202012.pdf)

3. Considering the resources cost of a new construction, it would need to be justified by an economic need in the market, under the concept that the "most sustainable building is the building that was not built". For instance, new buildings should not be financed in a market with high vacancy rates (or vacancy rate beyond the equilibrium), or in a market with negative population growth, as this could lead to providing incentives that do not effectively mitigate climate change.

4. The definition of NZEB changes from one country to another. The risk is that some countries might attract more capital by making the performance threshold less stringent.

7. Can the proposed criteria be used for activities outside the EU?

- (●) **Yes**
- ( ) No
- ( ) Don't know / no opinion / not relevant

If according to you the proposed criteria cannot be used for activities outside the EU, please propose alternative wording that could be considered:

2000 character(s) maximum

Listed property companies already use many different frameworks to report their impacts. The transition to the new EU taxonomy will therefore require from our members significant time and resources. As reported in the 2018 Synthesis Report (p.23) of the G20 Sustainable Finance Study Group, the competing sustainability classifications and taxonomies and the absence of a commonly agreed taxonomy in sustainable finance may also lead to possible misunderstandings, opacity and costs. We would encourage then the Technical Expert Group with the European Commission to coordinate its efforts at a global level and to promote the future EU taxonomy as a global standard for better comparison, clarity and competitiveness, as financial markets are international. The whole spectrum of the real estate value chain (for activities such as design, construction, operation, maintenance) needs a common language and harmonised schemes (such as the EPRA sustainability Best Practices Recommendations), standards and indicators, at the very least at the EU level.

Buildings - Renovation of existing buildings (residential and non-residential)

Sector classification and activity	
Macro-Sector	F – Construction Note that renovation of buildings relevant to any economic activity should be aligned with these thresholds.
NACE Level	2
Code	41, 43
Description	Renovation of existing buildings (residential and non-residential). Note this relates to activities in two NACE codes: construction of buildings (residential and non-residential) and Specialised Construction Activities.

Mitigation criteria	
Principle	Renovation of existing buildings can make a substantial contribution to climate mitigation by increasing energy and carbon efficiency. Renovation of existing buildings should be eligible in two cases; Buildings with high carbon or energy performance which can be renovated to achieve the highest performance standards. Buildings with lower carbon or energy performance which can make substantial improvements. In-use monitoring of actual performance is required to demonstrate that the building performs as designed. This should be measured and adjusted according to the national calculation method or the ISO 52000 standard series (e.g. normalised occupancy patterns and normalised average climate conditions over a time-span of at least 2-3 years). Lock- in should be avoided[20]. The TEG has adopted a precautionary principle to exclude buildings dedicated to fossil fuel projects. According to the IEA's World Energy

	Outlook, no CO2-emitting energy infrastructure is to be developed in the coming years if the Paris Agreement target is to be met, as emissions from existing infrastructure will already cover 95% of the global carbon budget (ref. IEA World Energy Outlook 2018; see also this article from The Guardian).
Metric	The TEG will investigate using in-use carbon performance (CO2e/m2/yr) or in-use energy performance (kWh/m2/yr), calculated according to the national calculation method or the ISO 52000 standard series. Alignment with Nearly-Zero Energy Buildings (NZEB) standards will be used as a proxy in cases where the above approach is not viable.
Threshold	The renovation should target either: Absolute performance: As with construction of new buildings, the TEG will investigate the feasibility of setting a country-specific threshold for renovation of buildings which already demonstrate high carbon or energy efficiency. Renovation to NZEB standards is accepted in the absence of this standard. Relative performance: A percentage reduction in energy consumption or carbon emissions performance of 50% should be achieved. A thorough building survey and the setup of an accurate energy model are required, to ensure that the extent of the improvement works required to improve the building's performance can be accurately determined based on the thermal performance of the existing building fabric.

Do no significant harm assessment	
(2) Adaptation[21]	Thermal resilience of the interior environment of the building and exterior environment around the building. This can be achieved using e.g. green infrastructures of different types Resilience to increased risk of extreme weather events. This could include floods, rain, wind and snowfall as well as temperature stress.

	Minimisation of flood risks and improved property protection (including natural water retention and drainage areas)
(3) Water	In water scarce areas (see EEA water scarcity mapping) water consumption during the use phase is minimised. Examples of measures include: low-flow taps and showers, appliances, toilets and urinals, rain-water harvesting and grey water recycling. Minimise possible contamination to water during construction and with a focus on: prevention of emissions of harmful substances such as diesel and oil, paint, solvents, cleaners and other harmful chemicals; prevention of construction debris entering water courses.
(4) Circular Economy	Maximise opportunities to re-use materials and minimise waste during construction and demolition. Increase life span of building, adopting design solution for making easy the adaptation of the building. Maximise the future potential of building material reuse and recycling, adopting design solutions for ease of deconstruction[22].
(5) Pollution	For commercial buildings, implement of staff travel plans and infrastructure to support electric vehicles and cycling. Minimise emissions to air, water and soil from the construction site, e.g. address transport emissions during the construction phase. Select fit-out and finishes to reduce indoor pollution (VOC, radon, etc.); Design ventilation in order to ensure healthy air and minimise the intake of external air pollution.

(6) Ecosystems	Where significant quantities of timber are used for construction purposes, this should be certified according to FSC/PECF standards or equivalent.

Rationale	
Additional notes on conclusions reached	The mitigation principles reflect the fundamental taxonomy aim of identifying economic activities that contribute substantially to climate change mitigation. The TEG is proposing thresholds that will encourage rapid transition of existing building stock while promoting high performance new buildings. There should be renovation pathways towards deep renovation which avoid lock-in effects in the future. Many of the buildings being renovated in the coming years will not be renovated again before 2050. The TEG proposes two thresholds for buildings: An absolute threshold for buildings which can be renovated to high standards; A percentage reduction in carbon emissions or energy consumption to allow renovation of inefficient building stock to be eligible under the taxonomy. The threshold of 50% is based on the experiences of the Climate Bonds Initiative in the Australian and US markets and feasible improvements based on local buildings performance standards. The Energy Performance Certificates (EPCs) are widely used in Europe to certify the level of energy performance of a building. The national definitions and classifications used for EPCs vary across EU Member States. The TEG is undertaking research to assess Energy Performance Certificates (EPC) and to consider their use as a proxy when evaluating taxonomy compliance. In the vast majority of cases, embedded emissions from renovation materials will not be material in the context of overall emissions savings from renovation, so a lifecycle metric is not proposed here. In-use monitoring is required as the energy and carbon performance of buildings often varies substantially between design and use phase (for example, see analysis by the Better Buildings Partnership). **Management of a portfolio of buildings**

	The majority of building stock improvements are made across a portfolio of buildings. Where a portfolio of buildings is considered, the approach taken at a portfolio level should be coherent with the standards for construction and renovation of individual buildings. The group proposes to develop user guidance to enable end-users of the taxonomy to interpret the standards proposed for individual buildings.

[17] Defined as: decisions which result in loss of economically viable choices for reducing energy demand in the future. Source: Global Buildings Performance Network.

[18] This input, for establishing criteria for no significant harm to the climate change adaptation objective, will be subject to further work and review by the Technical Expert Group with assistance from adaptation experts who respond to the concurrent call for experts.

[19] Verification of design solutions shall be with reference to the Checklists provided in the European Commission's Level(s) framework. The checklists can be found in table 2.2.2/2.2.5 of the Level 1 common performance assessment guidance. Other semi-quantitative indices, scoring or calculator tools may also be used provided that they address as a minimum the majority of the design aspects covered by Level(s).

Questions on renovation of existing buildings (residential and non- residential)

1. Do you agree with the proposed principle for determining a substantial contribution to climate mitigation for this activity?

- ○ Yes
- ○ **No**
- ○ Don't know / no opinion / not relevant

If you do not agree with the proposed principle for determining a substantial contribution to climate mitigation for this activity, what alternatives do you propose and why?

2000 character(s) maximum

1. If from an economical perspective, evidence demonstrates that new constructions are economically more viable than building renovations, from a climate change mitigation point of view, the latter are also key to support decarbonisation of the building sector. It can be much more energy consuming to build a new efficient building than to improve an existing building, especially if we look at the building's entire life cycle. We therefore encourage the TEG to prioritise investments in existing stocks (i.e. ownership and maintenance of buildings) rather than in new developments and constructions.

2. Being aware that deep renovations are economically and technically viable for a limited number of buildings, we suggest the TEG to include a new category of 'soft' renovations to promote 'Energy efficiency and low carbon projects'. In our experience, energy efficiency and renewable energy interventions (such as LED retrofit, windows replacement, solar installations) are often more feasible while retaining a strong carbon reduction potential[2].

3. With reference to design and in-use performance, we have experienced a massive gap between the expected and the actual performance of an operating building. That said, the ex-ante approach proposed by the TEG may lead to capital being allocated to buildings which do not meet the energy or carbon performance identified during the design phase.

4. It is important that the Taxonomy identifies clearly between the activities that actually improve the overall performance of the asset and/or portfolio, and the activities that merely finance the ownership of an existing asset over time. The Taxonomy should favor the refurbishment of assets/portfolios but not the sale of pure ownership of an existing efficient asset. A company that consistently invests in order to improve its existing stock will have a higher positive contribution over time than an investor who is just buying an existing efficient building.

2. **Do you agree with the proposed metrics for assessing the extent of the mitigation contribution?**

- ○ Yes
- ○ **No**
- ○ Don't know / no opinion / not relevant

If you do not agree with the proposed metrics for assessing the extent of the mitigation contribution, what alternatives do you propose and why?

2000 character(s) maximum

We do endorse the use of energy or carbon intensity metrics but we would like to highlight some potential limits of this approach:

1) Metrics on energy or carbon intensity only reflect the performance of an operating building and cannot be defined ex-ante (before the renovation is completed) as it highly depends on the functioning of the building. Moreover, listed property companies' experience shows that data collection related to tenants' consumption might represent a challenge and it is not always possible to build intensity metrics that really capture the overall performance of the building.
2) When considering a refurbishment/renovation, the Taxonomy should encourage the lifecycle approach to demonstrate, from an environmental perspective, the viability of a renovation instead of a new building construction (e.g. embodied carbon saved by refurbishing an existing building). In this regard, the Taxonomy should foresee a non-binding set of lifecycle metrics to better inform capital allocation decisions.

3. **Where thresholds have been considered, please indicate whether you agree with the proposed thresholds for the activity to qualify for inclusion in the Taxonomy.**

- ○ Yes
- ○ **No**
- ○ Don't know / no opinion / not relevant

Please explain your answer to question 3. If relevant, you may propose alternative thresholds that could be considered.

2000 character(s) maximum

We generally recommend that thresholds reflect different asset types (commercial, residential, etc.), change over time with a decreasing trajectory and take in consideration the features of existing buildings. In other words, the thresholds for existing buildings should be different and less strict than those adopted for new constructions.

With specific reference to NZEB and EPC, a few remarks:

1. The proposal for an alignment with NZEB standards used as a proxy does not seem to be appropriate for renovations. In France for eg, the national strategy on low carbon for buildings differentiates the expected performance of new buildings from the one of renovated buildings, in order to comply with a 2º trajectory.
2. In relation to the proposed relative performance:
    - The TEG should clarify whether the 50% reduction target is aligned with the 2º scenario as set out by the SBT Sectoral Decarbonisation Approach, or other scenarios' trajectories. In addition, there is no clarity as to the base year to be used when defining this reduction target.
    - For certain assets (eg. buildings in UNESCO protected areas) it will be not possible to achieve a 50% reduction target as the protection of the asset does not allow for optimum savings. The asset's peculiarity should be considered.
    - For our proposed new taxonomy category 'Energy efficiency and low carbon projects', the 50% threshold should be revised and lowered to reflect the actual reduction potential compared to deep renovations. Minimum energy efficiency requirements could be set, broken down by types of equipment.
3. As demonstrated by several studies (see BBP report: http://www.betterbuildingspartnership.co.uk/sites/default/files/media/attachment/BBP%20JLL%20-%2%20Tale%20of%20Two%20Buildings%202012.pdf) EPCs are not very reliable in capturing the real performance of a building both for new and existing building, and for this reason we discourage the TEG to use EPC as reference in setting carbon/energy thresholds.

4. **Do you agree with the 'do no significant harm' criteria identified for these activities?**

- ○ **Yes**
- ○ No

- ( ) Don't know / no opinion / not relevant

If you do not agree with the 'do no significant harm' criteria identified for these activities, what alternative approach or requirements do you propose (e.g. referring to existing market initiatives and best practices) and why?

2000 character(s) maximum

Although we do believe that the proposed 'do no significant harm' criteria are key for a building's operation and construction, most of them cannot be defined at single building level or by the building's owner. In fact, matters such as resilience or adaptation are covered by public authorities in local planning regulations as they have to be managed at the scale of a city or a neighborhood (flood protection, green land, air quality control). That said, even if corporates operating in real estate are willing to work in partnership with cities and local authorities to find common solutions to these issues, it is not clear how the TEG would evaluate these criteria and how they will be impacting the usability.

5. Is there any key area where significant harm needs to be avoided and which is not mentioned already?

- ( ) **Yes**
- ( ) No
- ( ) Don't know / no opinion / not relevant

Please explain your answer to question 5 and what requirements could be used to avoid such harm:

Considering the resources cost of a new construction and the climate change impacts associated, the taxonomy should enable deep or soft renovations first rather than new constructions. The latter would need to be justified by an economic need in the market, under the concept that the "most sustainable building is the building that was not built". For instance, new buildings should not be financed in a market with high vacancy rates (or vacancy rate beyond the equilibrium), or in a market with negative population growth.

6. Would the proposed criteria give rise to adverse consequences, e.g. risk of stranded assets or the risk of delivering inconsistent incentives?

- ( ) **Yes**
- ( ) No
- ( ) Don't know / no opinion / not relevant

Please explain your answer to question 6:

2000 character(s) maximum

1. As mentioned in question 1) EPRA's main concern is related to the ex-ante approach proposed by the TEG that may lead to capital allocation to buildings which do not meet the energy or carbon performance as expected in the design phase. Identifying gaps between designed and actual performance ex-post would not help from a taxonomy perspective, as the capital would have already been invested.

2. Capital allocation through the use of EPC would surely lead to delivering inconsistent incentives, as EPCs are not very reliable in capturing the real performance of a building, as demonstrated by many studies. (See for example the BBP report: http://www.betterbuildingspartnership.co.uk/sites/default/files/media/attachment/BBP%20JLL%20-%2%20Tale%20of%20Two%20Buildings%202012.pdf)

3. The definition of NZEB changes from one country to another. The risk is that some countries might attract more capital by making the performance threshold less stringent.

7. Can the proposed criteria be used for activities outside the EU?

- ( ) **Yes**
- ( )

No

Don’t know / no opinion / not relevant

If according to you the proposed criteria cannot be used for activities outside the EU, please propose alternative wording that could be considered:

2000 character(s) maximum

Listed property companies already use many different frameworks to report their impacts. The transition to the new EU taxonomy will therefore require from our members significant time and resources. As reported in the 2018 Synthesis Report (p.23) of the G20 Sustainable Finance Study Group, the competing sustainability classifications and taxonomies and the absence of a commonly agreed taxonomy in sustainable finance may also lead to possible misunderstandings, opacity and costs. We would encourage the Technical Expert Group with the European Commission to coordinate its efforts at a global level and to promote the future EU taxonomy as a global standard for better comparison, clarity and competitiveness, as financial markets are international. The whole spectrum of the real estate value chain (for activities such as design, construction, operation, maintenance) needs a common language and harmonised schemes (such as the EPRA sustainability Best Practices Recommendations), standards and indicators, at the very least at the EU level.